



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,191	12/05/2003	Gary L. Swoboda	TI-34672	2408
23494	7590	10/31/2007	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			KHANNA, MADHU	
			ART UNIT	PAPER NUMBER
			4117	
			NOTIFICATION DATE	DELIVERY MODE
			10/31/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com  
uspto@dlemail.itg.ti.com

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/729,191	SWOBODA ET AL.
	Examiner Madhu Khanna	Art Unit 4117

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 05 December 2003.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-10 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-10 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. Applicant is requested to remove non formal information from the invention's disclosure, e.g. attorney docket number in Related Applications section and replace/update with either the actual application number or patent number if applicable.
  
2. The disclosure is objected to because of the following excerpt of the written description is unclear:
  - (i) "When the protocol is strictly followed, a group of packet groups can be generated in which a header is implied, rather than transmitted" (e.g. pages 23, lines 5-8); and (ii) "An implied header indicates that the header exists" (e.g. page 24, lines 27-29). It is unclear as to what is meant by implied, rather than transmitted". Appropriate correction is required.

### ***Claim Objections***

3. Claims 2, 7 and 10 are objected to because of the following informalities: the claims use the word "patents" where the intended word is pre-assumed to be "packets". Appropriate correction is required.

***Claim Rejection - 35 USC § 101***

4. Claims 1-5 are rejected under 35 U.S.C. 101 which reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In this case, computer-related inventions whether descriptive or functionally descriptive material are non-statutory categories when claimed as descriptive material *per se* (see *Warmerdam*, 33 F.3d at 1360 USPQ2d at 1759), falling under the "process" category (i.e. inventions that consist of a series of steps or acts to be performed). See 35 U.S.C. 100(b). ("The term process means, art, or method, and includes a new or a known process, machine, manufacture, composition of matter or material"). Functional descriptive material: "data structures" representing descriptive material *per se* or computer program representing computer listing *per se* (i.e. software *per se*) when embodied in a computer-readable media are still not statutory because they are not capable of causing functional change in the computer. However, a claimed computer-readable storage medium encoded with a data structure, computer listing or computer program, having defined structural and functional interrelationships between the data structure, computer listing or computer program and the computer software and hardware component, which permit the data structure's, listing or program's functionality to be realized, is statutory (see MPEP §2106).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen (US 2002/0143988) (referred to as Jensen hereafter), in view of Shamoona et al. (US 7,233,948) (referred to as Shamoona hereafter).

Regarding claim 1, Jensen teaches data for use in a trace stream, the data comprising:

at least one packet subgroup (frame, 400 of FIG. 4), each packet (frame fragment) having an extension portion (first frame fragment indicator (FFFI), 315 of FIG. 3) and a payload portion (payload data, 305 of FIG. 3),

where the first packet (frame fragment 405<sub>1</sub> of FIG. 4) in each packet subgroup (frame) includes a first extension portion (FFF1 is set to TRUE, 430<sub>1</sub> of FIG. 4),

the packets (frame fragments 405<sub>2</sub> and 405<sub>3</sub> of FIG. 4) following the first packet (frame fragment) in subgroup (frame) that are a continuation of the first subgroup packet (frame) having a second extension (FALSE, 430<sub>2</sub> and 430<sub>3</sub> of FIG. 4); however Jensen does not disclose a header packet with a field determining the number of subgroups.

Shamoon teaches a packet group (streams, column 4 lines 53-54) comprising:  
at least one header packet (header); and  
where the number of packet subgroups (packets) determined by a field in the header packet (header which specifies the number of following packets which are part of that stream, column 4 lines 58-61).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention given Jensen's desire to improve techniques for data streaming including in the environment of multimedia, the teachings of Shamoon for controlling and protecting media information in streamed format. One would be motivated to utilize the teachings of Shamoon because in doing so the efficiency of transmitting streamed data from a sending unit to a receiving unit would be enhanced.

Regarding claim 2, Jensen further teaches when in the sequence of packets (frame fragments) of the last subgroup of packets (frame), the next sequential packet does not have the second extension (FFF1 set to FALSE), the packet group (stream) has ended (Jensen teaches that all frame fragments which are a continuation of a frame have FFFF

set to FALSE, therefore if a next sequential packet does have this setting, it is not a continuation frame fragment, [0029]; Shamoons teaches that a stream header specifies the number of packets (frames) which are part of a stream (column 4 lines 58-61, it is noted that once the specified number of packets (frames) has been transmitted the stream ends and any following packet, with FFFI set to TRUE, is no longer a continuation of the previous stream.

Regarding claim 3, the next sequential packet (frame fragment) begins a new packet group (stream) (given Shamoons teaching that a header of a stream specifies the number of following packets which are part of that stream, i.e. once the specified number of packets has ended so has that stream, and that the next sequential packet/frame fragment will be the beginning of a new packet group/stream, column 4, lines 58-61).

Regarding claim 4, the packet group (stream) as recited in claim 3 wherein for selected packet groups, a header is implied for new packet groups (streams) (Shamoons: a header is included in a stream, which identifies packets as belonging to a particular stream, column 4 lines 55-61).

Regarding claim 5, when the header is defined to have more than one packet (Shamoons: header which specifies the number of following packets which are part of that stream, column 4 lines 58-61), the extension portions (FFF1) of the packets (frame

fragments) following the first packet (header) can be used to convey information (Jensen: first frame fragment indicator specifies whether a frame fragment is a first fragment generated from a frame [par 0029]).

8. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen in view of Shamoon in further view of Williamson (US 2003/0041166)

Regarding claim 6, comprising substantially the same limitation(s) as discussed on claim 1, same rationale of rejection is applicable. Further, limitation(s) such as a processor test and debug system, the system comprising: a host processing (debugger on first host); and a target processor (application that is being debugged on second host, where the target processor transmitting trace streams to the host processing unit, the trace streams permitting the host processing unit to reconstruct the operation of target processing unit, at least one trace stream being comprised of a sequence of packet groups are not taught by the Jensen nor Shamoon.

Williamson teaches a processor test and debug system [0023], the system comprising :a host processing (debugger on first host, [0023]); and a target processor (application that is being debugged on second host, [0023]), the target processor transmitting trace streams to the host processing unit (the second software tool transmits data to the first software tool running on the first host, [0023]),

Art Unit: 2142

the trace streams permitting the host processing unit to reconstruct (perform error checking and/or assemble) the operation of target processing unit ([0027]), at least one trace stream being comprised of a sequence of packet groups (plurality of data entities [0010]).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention given the teachings of Jensen-Shamoon for enhancing the efficiency of streamed data by improving frame fragmentation and further protecting and controlling functionality, the teachings of Williamson for effectively transmitting a plurality of data entities in a stream over a physical medium. One of ordinary skill pertaining streamed data transmission would recognize that using a wrapper to allow data entities to be transmitted over unrelated mediums applied to the data streaming techniques of Jensen-Shamoon would expand the capability of uses. One would be motivated to utilize the teaching of Williamson because in doing so the streaming of frames would be available for a wider range of networks.

Regarding claim 7, the claim is substantially the same as claim 2, same rationale of rejection is applicable.

Regarding claim 8, the claim is substantially the same as claim 3, same rationale of rejection is applicable.

Regarding claim 9, this method claim comprises substantially the same limitation(s) as discussed on claim 1, same rationale of rejection is applicable. Further, limitation(s) include

the method for transferring information from a target processor to a host processing unit (Williamson: [0023]) in trace streams (Williamson: stream of processing, [0010]).

Regarding claim 10, the claim is substantially the same as claim 2, same rationale of rejection is applicable.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madhu Khanna whose telephone number is 571-270-3629. The examiner can normally be reached on Mon-Thurs 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beatriz Prieto can be reached on 571-272-3902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Madhu Khanna  
Patent Examiner

*Beatriz Prieto*  
BEATRIZ PRIETO  
SUPERVISORY PATENT EXAMINER